REMARKS

The Office Action dated October 8, 2008 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 25, 32, 33, 37, 39, 40, 42, 46, 47, 49, 50-52, 59, 60, 64, 66 and 67 have been amended to more particularly point out and distinctly claim the subject matter of the invention. No new matter has been added. Claims 25-68 are presently pending and respectfully submitted for reconsideration.

Claims 25, 28-40, 42-44, 46, and 47 were rejected under 35 U.S.C. §103(a) as being unpatentable over Cidon et al. (Control Mechanism for High Speed Networks) in view of Yum et al. (Multicast source Routing Packet-Switched Networks) and further in view of Reinshmidt et al. (U.S. Patent Publication 2002/0150041). The Office Action took the position that Cidon discloses all of the elements of the claims, with the exception of generating updating information and where the updating information sent to the offspring nodes differ for each offspring node based on the spanning tree structure. The Office Action then cited Yum and Reinshmidt as allegedly curing these deficiencies in Cidon. Applicants respectfully submit that Cidon, Yum and Reinshmidt together fail to teach each of the claim recitations of any of the currently pending claims. This rejection is respectfully traversed for at least the following reasons.

Claim 25 recites a method including detecting a network parameter change in a network node of the network. The method also includes determining, based on topology

information of a radio access network, a spanning tree of routing paths corresponding to shortest paths from the network node to other nodes. The method also includes distributing network parameter information indicating the network parameter change from the network node to the other nodes in accordance with the spanning tree. The network node is configured to generate, for each of its immediate offspring nodes, a respective updating information and to send the respective updating information to all the immediate offspring nodes. The respective updating information sent to the immediate offspring nodes differs for each of the immediate offspring nodes based on the spanning tree structure.

Claim 42 recites an apparatus that includes a detector configured to detect a change in a network parameter related to the apparatus. The apparatus also includes a distributor configured to distribute network parameter information to network nodes of a transmission network. The distributor is configured to distribute the network parameter information indicating the network parameter change towards the other network nodes in response to the detection and in accordance with a spanning tree of routing paths corresponding to shortest paths from the apparatus to the network nodes. The apparatus further includes a generator configured to generate for each of its immediate offspring nodes a respective updating information and to send the respective updating information to all the immediate offspring nodes. The updated information is sent to the other nodes and the updated information differs for each of the immediate offspring nodes based on the spanning tree topology.

Claim 46 recites an apparatus that includes a distributor configured to distribute a network parameter information to network nodes of a radio access network. The apparatus includes a receiving configured to receive a network parameter information from an upper node, to update a stored parameter information according to the received network parameter information, and to distribute the network parameter information to its immediate offspring network nodes based on a branch information included in the network parameter information. The branch information is derived from a spanning tree routing topology. The apparatus also includes an updater configured to update the branch information in the network parameter information before distributing the network parameter information to the network nodes. The updated information is sent to the network nodes and the updated information differs for each of the network nodes based on the spanning tree topology.

Claim 49 recites a system that includes detecting means for detecting a network parameter change in a network node of the network. The system also includes determining means for determining, based on topology information of a radio access network, a spanning tree of routing paths corresponding to shortest paths from a network node to other nodes. The method also includes distributing means for distributing network parameter information indicating the network parameter change from the network node to the other nodes in accordance with the spanning tree. The network node is configured to generate, for each of its immediate offspring nodes, a respective updating information and to send the respective updating information to all its immediate offspring

nodes. The respective updating information sent to the immediate offspring nodes differs for each of the immediate offspring nodes based on the spanning tree structure.

Claims 50-52 are independent computer program and means-plus-function type claims similar to one or more of the above independent claims, although, each of the independent claims have their own scope.

As will be discussed below, Cidon in view of Yum and Reinshmidt fails to disclose or suggest every claim feature recited in claims 25, 28-40, 42-44, and 46-52, and therefore fails to provide the features discussed above.

Page 5, line 1 of the Office Action admitted that Cidon and Yum are deficient with respect to certain features of the independent claims 25, 42, 46 and 49-52. Applicants agree that Cidon and Yum do not disclose all of the claim recitations of the independent claims, however, Applicants disagree that Reinshmidt cures those deficiencies of Cidon and Yum. For instance, the combination of Cidon, Yum and Reinshmidt fails to disclose "wherein said network node is configured to generate, for each of its immediate offspring nodes, a respective updating information and to send said respective updating information to all of the immediate offspring nodes...the respective updating information...differs for each of the immediate offspring nodes based on the spanning tree structure", as recited, in part, in claim 25 and similarly in independent claims 42, 46 and 49-52.

Reinshmidt discloses a method for providing quality of service for data transmission over the Internet. In one example, certain network nodes are selected as access points for other network nodes. The access points may be designated as source

and destination nodes for transmitting and receiving data for other network nodes. In addition, certain network nodes are designated as intermediate nodes to provide alternate paths between the original source and destination nodes (see FIGS. 2-4 of Reinshmidt).

In Reinshmidt, there are no "offspring nodes", which an initiating network node sends "updating information" to in parallel. Reinshmidt is unrelated to any spanning tree structure and is further unrelated to any "updating information" being sent to each of the "immediate offspring nodes" of the designated network node. Reinshmidt is directed to the quality of transportation (QoS) of selected data packets over a data network. Reinshmidt does not disclose "wherein said network node is configured to generate, for each of its immediate offspring nodes, a respective updating information and to send said respective updating information to all of the immediate offspring nodes...the respective updating information...differs for each of the immediate offspring nodes based on the spanning tree structure", as recited, in part, in claim 25 and similarly in independent claims 42, 46 and 49-52.

The Office Action relied on paragraph [0079] of Reinshmidt as allegedly disclosing "updating information sent to the offspring nodes differs for each offspring node based on the spanning tree structure." Applicants disagree and submit that paragraph [0079] of Reinshmidt discloses that a new header may be added to an original packet, and, that a "current hop number" is updated every time the packet enters a node (see ten lines up from the bottom of paragraph [0079] of Reinshmidt). Additionally, in the scenario where the "offset number" and the "current hop number" differ, the network

node places the next consecutive node's IP address in front of the packet, and updates the current hop number accordingly.

The modifying of the next consecutive node's IP address, and updates to the routing table "current hop number" are not procedures which are comparable to the spanning tree information distribution recited in the pending claims. For example, claim 25 recites generating "updating information" for "each of the immediate offspring nodes" of a network node and sending the respective updating information to all the immediate offspring nodes (emphasis added). Furthermore, the claims also recite that the updating information sent to each of the offspring nodes is "based on the tree structure" and "differs for each of the immediate offspring nodes" (emphasis added). Therefore, the respective updating information for each of the immediate offspring nodes is customized and is not performed in a broadcast message format. Reinshmidt simply fails to disclose providing information to more than one immediate offspring node in the manner prescribed by the claims.

In addition to the above-noted deficiencies of Reinshmidt, Applicants further submit that Cidon and Yum still fail to cure the deficiencies of Reinshmidt with respect to the pending claims. Applicants respectfully submit that Cidon and Yum, taken individually, or in combination also fail to teach or suggest "wherein said network node is configured to generate, for each of its immediate offspring nodes, a respective updating information and to send said respective updating information to all of the immediate offspring nodes...wherein the respective updating information sent to the immediate

offspring nodes differs for each of the immediate offspring node based on the spanning tree structure", as recited, in part, in independent claim 25 and similarly in independent claims 42, 46 and 49-52.

Cidon discloses packet-switched networks with a header-based routing system. The topology broadcast algorithm disclosed in Cidon uses a spanning tree structure described in connection with the PARIS system. In contrast to the teachings of Cidon, certain embodiments of the present disclosure are directed to distributing network parameter information in a radio access network. In one example, the signaling between IP base stations is performed via an interface supporting both control plane signaling and user plane traffic (please see page 6, second paragraph, of the original application).

The topology broadcast scheme described in Cidon is implemented as a header-based routing mechanism, each desired route along the spanning tree structure can be set by modifying corresponding header addresses. The topology update messages sent by an initial network node are the same for each neighbor node within the topology spanning tree. Furthermore, the neighbor nodes merely forward the received topology update message over the other tree links (please see page 0263, left hand column, last paragraph of Cidon).

In contrast to the disclosure of Cidon, independent claims 25, 42, 26 and 49-52 recite "wherein said network node is configured to generate, for each of its immediate offspring nodes, a respective updating information and to send said respective updating information to all the immediate offspring nodes...wherein the respective updating

information sent to the immediate offspring nodes differs for each of the immediate offspring node based on the spanning tree structure." As the claim recitations suggest, a network node generates for each of its immediate offspring nodes respective updating information which is individually generated for each of the immediate offspring nodes based on the topology information stored at the network node. The network parameter information sent to the immediate offspring nodes is different for each of the immediate offspring nodes based on the spanning tree structure. None of the teachings disclosed in Cidon of Yum suggest providing dedicated network parameter information for each of the immediate offspring nodes.

As stated above, Cidon describes several control mechanisms for high speed networks and a topology broadcast function using a spanning tree structure is merely mentioned as one of a plurality of possible algorithms which may be used. The disclosures of Cidon and Reinshmidt do not disclose all of the subject matter recited in the claims, and, Yum fails to cure those deficiencies of Cidon and Reinshmidt with respect to the claims.

Yum discloses a multicast source routing mechanism where a spanning tree structure is used for source routing multicast packets to provide a point-to-multipoint transmission. Yum is directed to an address coding mechanism for multicast source routing packets in packet-switched networks. Yum discloses an algorithm for processing these address codes at intermediate output link adaptors, which involves only the recognition of a particular link label at the front part of the address code for

implementation in hardware. Yum also discloses a Reverse Path address code that allows individual destination nodes to retrieve the reverse path address without search the topology database and invoking any route computation program. (see Yum, Abstract, pages 1285 to 1287 and FIGS. 1-3)

Yum fails to disclose or suggest "wherein said network node is configured to generate, for each of its immediate offspring nodes, a respective updating information and to send said respective updating information to all of the immediate offspring nodes...wherein the respective updating information sent to the immediate offspring nodes differs for each of the immediate offspring nodes based on the spanning tree structure", as recited, in part, in independent claim 25 and similarly in independent claims 42, 26 and 49-52.

Therefore, Applicants submit that Cidon, Yum and Reinshmidt fail to disclose or suggest all of the subject matter of independent claims 25, 42, 26 and 49-52. By virtue of dependency, Cidon, Yum and Reinshmidt also fail to teach the subject matter of those claims dependent thereon. Withdrawal of the rejection of claims 25, 28-40, 42-44, 46, 47 and 49-52 are kindly requested.

The Office Action rejected claims 26-27, 41, 45, 48, 53, 54 and 68 under 35 U.S.C. §103(a) as allegedly unpatentable as obvious over Cidon in view of Yum and Reinshmidt, and further in view of Neumiller, *et al.* (WO 00/70782) ("Neumiller").

As will be discussed below, Cidon in view of Yum and Reinshmidt, and further in view of Neumiller fails to disclose or suggest every claim feature recited in claims 26-27, 41, 45, 48, 53, 54 and 68, and therefore fails to provide the features discussed above.

Cidon, Yum and Reinshmidt were discussed above. Neumiller is directed to a method and apparatus for performing selection within a communication system, where frames received by base stations are assigned a frame-quality indicator by the base station. The frame-quality indicator is continuously backhauled to a switch or a radio access network router for routing a selected frame accordingly. (Neumiller, page 3, lines 7-22)

As noted above, Cidon in view of Yum and Reinshmidt fails to disclose or suggest every claim feature recited in claim 25, and similarly in claims 42, 46 and 49-52. Neumiller fails to cure the deficiencies of Cidon, Yum and Reinshmidt. Specifically, Neumiller fails to disclose or suggest at least "wherein said network node is configured to generate, for each of its immediate offspring nodes, a respective updating information and to send said respective updating information to all of the immediate offspring nodes and where the information sent to the immediate offspring node differs for each of the immediate offspring nodes based on the spanning tree structure." Accordingly, Cidon in view of Yum and Reinshmidt, and further in view of Neumiller fails to disclose or suggest every claim feature recited in claim 25, and similarly in claim 42, 46 and 49-52.

Claims 26, 27 and 41 are dependent upon claim 25. Claim 45 is dependent upon claim 42. Claim 48 is dependent upon claim 46. Claims 53, 54 and 68 are dependent

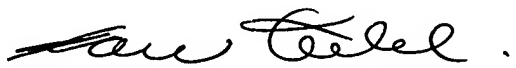
upon claim 42. Therefore, claims 26, 27, 41, 45, 48, 53, 54 and 68 should be allowed for at least their dependence upon an allowable base claim, and for the limitations recited therein.

For at least the reasons discussed above, Applicants respectfully submit that the cited references fail to disclose or suggest all of the elements of the claimed invention. These distinctions are more than sufficient to render the claimed invention unanticipated and unobvious. It is therefore respectfully requested that all of claims 25-68 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



Kamran Emdadi
Registration No. 58,823

Customer No. 32294
SQUIRE, SANDERS & DEMPSEY LLP
14TH Floor
8000 Towers Crescent Drive
Vienna, Virginia 22182-6212
Telephone: 703-720-7800
Fax: 703-720-7802

KE:sjm